

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

1. (Previously presented) In an information processing system comprising a plurality of stacks each comprising at least one stack frame, a method for associating a phase with an activation in a computer program running at least one thread, the method comprising steps of:

- allocating space in memory for an activation count for each frame;
- zeroing the activation count whenever the program creates a new stack frame;
- determining whether an interval has transpired during program execution;
- continuing the program until the interval transpires if the interval has not transpired;
- examining each stack's content and incrementing the activation count for each frame of the stacks once the interval has transpired;
- detecting the phase whose activation count is non-zero;
- associating the phase with the activation;
- changing the return address of the program to force the program to call a designated procedure to perform an action; and
- ensuring that when the phase ends, the action is performed immediately.

2. (Previously presented) The method of claim 1 further comprising logging activation counts during each interval after zeroing the activation count.

3. (Original) The method of claim 1 wherein the activation count is implemented by reserving storage in each stack frame.

4. (Previously presented) The method of claim 1, further comprising performing the steps of

claim 1 at periodic intervals of time according to a system clock.

5-7. (Canceled)

8. (Original) The method of claim 1 further comprising scheduling garbage collection after each associated phase.

9. (Previously presented) The method of claim 1 further comprising scheduling thread switches after the step of associating the phase.

10. (Previously presented) The method of claim 1 further comprising scheduling checkpoint operations after the step of associating the phase.

11. (Previously presented) The method of claim 1 further comprising presenting a visualization of program phase behavior after the step of associating the phase.

12. (Previously presented) The method of claim 1 further comprising resetting profile data after the step of associating the phase.

13. (Canceled)

14. (Original) The method of claim 1 further comprising implementing activation counts in a side data structure.

15. (Original) The method of claim 1 wherein the activation count is implemented as an array paralleling the stack.

16 – 30. (Canceled)